

SEQUENCE LISTING

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Williamson, Anna-Lise
Rybicki, Edward Peter

<120> A Method for the Production of HIV-1 GAG Virus-Like Particles

<130> 45669-316582

<140> US 10/537,557

<141> 2005-06-03

<150> PCT/IB03/005634

<151> 2003-12-04

<160> 4

<170> PatentIn version 3.3

<210> 1

<211> 1549

<212> DNA

<213> Homo sapiens

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 catcaagcca tatcacctag aaccttgaat gcatgggtaa aagtaataga agaaaagget 480
 tttagcccag aggtaatacc catgtttaca gcattatcag aaggagccac cccacaagat 540

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Leu Lys His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Leu
 35 40 45

Asn Pro Gly Leu Leu Glu Thr Ser Glu Gly Cys Lys Gln Ile Met Lys
 50 55 60

Gln Leu Gln Pro Ala Leu Gln Thr Gly Thr Glu Glu Leu Lys Ser Leu
 65 70 75 80

Tyr Asn Thr Val Ala Thr Leu Tyr Cys Val His Glu Lys Ile Glu Val
 85 90 95

Arg Asp Thr Lys Glu Ala Leu Asp Lys Ile Glu Glu Glu Gln Asn Lys
 100 105 110

Cys Gln Gln Lys Thr Gln Gln Ala Lys Ala Ala Asp Gly Lys Val Ser
 115 120 125

Gln Asn Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His Gln
 130 135 140

Ala Ile Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Ile Glu Glu
 145 150 155 160

Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe Thr Ala Leu Ser Glu
 165 170 175

Gly Ala Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly
 180 185 190

His Gln Ala Ala Met Gln Met Leu Lys Asp Thr Ile Asn Glu Glu Ala
 195 200 205

Ala Glu Trp Asp Arg Leu His Pro Val His Ala Gly Pro Ile Ala Pro
 210 215 220

Gly Gln Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser
 225 230 235 240

Thr Leu Gln Glu Gln Ile Ala Trp Met Thr Ser Asn Pro Pro Ile Pro

245

250

255

Val Gly Asp Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile
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Val Arg Met Tyr Ser Pro Val Ser Ile Leu Asp Ile Arg Gln Gly Pro
 275 280 285

Lys Glu Pro Phe Arg Asp Tyr Val Asp Arg Phe Phe Lys Thr Leu Arg
 290 295 300

Ala Glu Gln Ala Thr Gln Glu Val Lys Asn Trp Met Thr Asp Thr Leu
 305 310 315 320

Leu Val Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Arg Ala Leu
 325 330 335

Gly Pro Gly Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val
 340 345 350

Gly Gly Pro Gly His Lys Ala Arg Val Leu Ala Glu Ala Met Ser Gln
 355 360 365

Thr Asn Ser Gly Asn Ile Met Met Gln Arg Ser Asn Phe Lys Gly Pro
 370 375 380

Arg Arg Ile Val Lys Cys Phe Asn Cys Gly Lys Glu Gly His Ile Ala
 385 390 395 400

Arg Asn Cys Arg Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys
 405 410 415

Glu Gly His Gln Met Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu
 420 425 430

Gly Lys Ile Trp Pro Ser His Lys Gly Arg Pro Gly Asn Phe Leu Gln
 435 440 445

Asn Arg Pro Glu Pro Thr Ala Pro Pro Ala Glu Ser Phe Arg Phe Glu
 450 455 460

Glu Thr Thr Pro Ala Pro Lys Gln Glu Pro Ile Glu Arg Glu Pro Leu
 465 470 475 480

Thr Ser Leu Lys Ser Leu Phe Gly Ser Asp Pro Leu Ser Gln Lys Gly
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Ala Arg Gln Gly Arg Leu Ser Thr Gln Glu Gln Met Ile Gln Tyr Cys
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Arg

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 20 25 30

His Ile Val Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Leu Asn Pro
 35 40 45

Gly Leu Leu Glu Thr Ser Glu Gly Cys Lys Gln Ile Met Lys Gln Leu
 50 55 60

Gln Pro Ala Leu Gln Thr Gly Thr Glu Glu Leu Lys Ser Leu Tyr Asn
 65 70 75 80

Thr Val Ala Thr Leu Tyr Cys Val His Glu Lys Ile Glu Val Arg Asp
 85 90 95

Thr Lys Glu Ala Leu Asp Lys Ile Glu Glu Glu Gln Asn Lys Cys Gln
 100 105 110

Gln Lys Thr Gln Gln Ala Lys Ala Ala Asp Gly Lys Val Ser Gln Asn
 115 120 125

Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His Gln Ala Ile
 130 135 140

Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Ile Glu Glu Lys Ala
 145 150 155 160

Phe Ser Pro Glu Val Ile Pro Met Phe Thr Ala Leu Ser Glu Gly Ala
 165 170 175

Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln
 180 185 190

Ala Ala Met Gln Met Leu Lys Asp Thr Ile Asn Glu Glu Ala Ala Glu
 195 200 205

Trp Asp Arg Leu His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln
 210 215 220

Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu
 225 230 235 240

Gln Glu Gln Ile Ala Trp Met Thr Ser Asn Pro Pro Ile Pro Val Gly
 245 250 255

Asp Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg
 260 265 270

Met Tyr Ser Pro Val Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu
 275 280 285

Pro Phe Arg Asp Tyr Val Asp Arg Phe Phe Lys Thr Leu Arg Ala Glu
 290 295 300

Gln Ala Thr Gln Glu Val Lys Asn Trp Met Thr Asp Thr Leu Leu Val
 305 310 315 320

Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Arg Ala Leu Gly Pro
 325 330 335

Gly Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly
 340 345 350

Pro Gly His Lys Ala Arg Val Leu Ala Glu Ala Met Ser Gln Thr Asn
 355 360 365

Ser Gly Asn Ile Met Met Gln Arg Ser Asn Phe Lys Gly Pro Arg Arg
 370 375 380

Ile Val Lys Cys Phe Asn Cys Gly Lys Glu Gly His Ile Ala Arg Asn
 385 390 395 400

Cys Arg Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu Gly
 405 410 415

His Gln Met Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly Lys
 420 425 430

Ile Trp Pro Ser His Lys Gly Arg Pro Gly Asn Phe Leu Gln Asn Arg
 435 440 445

Pro Glu Pro Thr Ala Pro Pro Ala Glu Ser Phe Arg Phe Glu Glu Thr
 450 455 460

Thr Pro Ala Pro Lys Gln Glu Pro Ile Glu Arg Glu Pro Leu Thr Ser
 465 470 475 480

Leu Lys Ser Leu Phe Gly Ser Asp Pro Leu Ser Gln
 485 490